

Submit 3 Copies To Appropriate District Office  
District I  
1625 N. French Dr., Hobbs, NM 87240  
District II  
1301 W. Grand Ave., Artesia, NM 88210  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-103  
June 19, 2008

|                                                                                                                                                                                                                                          |  |                                                                                                     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------|
| <b>SUNDRY NOTICES AND REPORTS ON WELLS</b><br>(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)                            |  | WELL API NO.<br><b>30-045-34738</b>                                                                 |
| 1. Type of Well:<br>Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other                                                                                                                                 |  | 5. Indicate Type of Lease<br>STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/> |
| 2. Name of Operator<br><b>XTO Energy Inc.</b>                                                                                                                                                                                            |  | 6. State Oil & Gas Lease No.                                                                        |
| 3. Address of Operator<br><b>382 CR 3100 AZTEC, NM 87410</b>                                                                                                                                                                             |  | 7. Lease Name or Unit Agreement Name:<br><b>MORRIS GAS COM C</b>                                    |
| 4. Well Location<br>Unit Letter <b>N</b> : <b>850</b> feet from the <b>SOUTH</b> line and <b>1785</b> feet from the <b>WEST</b> line<br>Section <b>26</b> Township <b>29-N</b> Range <b>10-W</b> NMPM <b>NMPM</b> County <b>SAN JUAN</b> |  | 8. Well Number<br><b>#1Y</b>                                                                        |
| 11. Elevation (Show whether DR, RKB, RT, GR, etc.)<br><b>5546'</b>                                                                                                                                                                       |  | 9. OGRID Number<br><b>5380</b>                                                                      |
|                                                                                                                                                                                                                                          |  | 10. Pool name or Wildcat<br><b>DK / MV / GP / CH</b>                                                |

12. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐  
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐  
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐  
DOWNHOLE COMMINGLE ☐

OTHER: REMEDIAL CEMENT SQUEEZE ☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐  
COMMENCE DRILLING OPNS. ☐ P AND A ☐  
CASING/CEMENT JOB ☐

OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

XTO Energy Inc. intends to proceed with completion of this well and perform a remedial cement job per the attached procedure.

RCVD SEP 29 '08  
OIL CONS. DIV.  
DIST. 3

Spud Date:

06/10/2008

Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE

*Dolena Johnson*

TITLE

REGULATORY CLERK

DATE

09/26/2008

Type or print name **DOLENA JOHNSON**

E-mail address:

[dee\\_johnson@xtoenergy.com](mailto:dee_johnson@xtoenergy.com)

PHONE **505-333-3100**

For State Use Only

APPROVED BY

*Felix G. Peltz*

TITLE

Deputy Oil & Gas Inspector.  
District #3

DATE

SEP 30 2008

Conditions of Approval (if any):

**MORRIS GAS COM C #1Y  
DK/GP/MV/CH COMPLETION  
SEC 26, T29N, R10W  
SAN JUAN CO., NM**

RNL \_\_\_\_\_  
TAL \_\_\_\_\_  
DLC \_\_\_\_\_

**SURF CSG:** 9-5/8", 47#, J-55, ST&C CSG @ 1,270'. CIRC 30 BBLS TO SURF.

**PROD CSG:** 5-1/2", 15.5#, J-55 CSG @ 6,634'. FC @ 6,588'. MARKER JT @ 6,172'-6,187' & 3,371'-3,386'. PBTB @ 6,588'. DV TL @ 4,109'. DRIFT = 4.825".  
CAPACITY = 0.0238 BPF OR 0.9997 GPF  
**BURST = 4,810 PSI (TREATING @ 80% = 3,850 PSI).**

**CEMENT:** CMT'D 1ST STAGE W/400 SX CMT. CIRC TRACE CMT TO SURF.

CMT'D 2<sup>ND</sup> STG W/495 SX CMT. NO CMT TO SURF.

**FORMATIONS:** BASIN DAKOTA (WELL # 68284, AFE # 803946)  
ARMENTA GALLUP (WELL # 68286, AFE # 803947)  
BLANCO MESAVERDE (WELL # 68285, AFE # 803948)  
OTERO CHACRA (WELL # 68287, AFE # 803945)

**PROCEDURE:**

NOTE: Before beginning completion work please verify that pre-approval for extension of cement remediation work has been granted.

- Set 3 - 400 bbl frac tnks & 1 flowback tnk. Fill frac tnks w/2% KCl wtr. **NOTE:** Have frac co. test wtr for compatibility prior to frac & add biocide. Heat wtr in the frac tnks so that wtr temperature @ frac time is  $\pm 80^{\circ}$  F. Hot oil trk must be clean to avoid contaminating the frac wtr.
- Perf DK w/3-1/8" csg gun loaded Owen HSC-3125-302 charges or equivalent performance charges (10 gm, 0.34" EHD, 21.42" pene, ttl 23 holes)

| Dakota Perforations |     |       |     |       |     |       |     |       |     |
|---------------------|-----|-------|-----|-------|-----|-------|-----|-------|-----|
| Perf                | CCL | Perf  | CCL | Perf  | CCL | Perf  | CCL | Perf  | CCL |
| 6,472               |     | 6,440 |     | 6,401 |     | 6,354 |     | 6,298 |     |
| 6,470               |     | 6,437 |     | 6,396 |     | 6,323 |     | 6,295 |     |
| 6,452               |     | 6,434 |     | 6,382 |     | 6,320 |     | 6,293 |     |
| 6,446               |     | 6,427 |     | 6,369 |     | 6,316 |     |       |     |
| 6,442               |     | 6,422 |     | 6,366 |     | 6,304 |     |       |     |

- MIRU acid equip, frac equip & 10K psig isolation tl.
- BD perfs. EIR w/2% KCl wtr. Max press 3,850 psig. Switch to acid. Acidize Dakota perfs fr/6,293' - 6,472' w/1,500 gals 15% NEFE HCl acid (FE control, surf & CI additives) + 35 - 7/8" 1.1 SG Green Bio balls. Flush acid 3 bbls past btm perf w/157 bbls 2% KCl wtr or until ball off. Pump flush @  $\pm 12$  BPM. Record ISIP, 5". Surge off balls. RD ball dropper. Begin CO2 cooldown.

5. Frac DK perfs fr/6,293' - 6,472' down 5-1/2" casing at 35 BPM with 67,500 gals 70Q, CO2 foamed, 25# XL gelled, 2% KCl water (PurGel III) carrying 113,000# 20/40 BASF sand and 22,000# 20/40 CRC sand. Flush w/2% KCl wtr. Total flush volume 6,164 gals (3 bbls short of top perf). Est TP 2,850 psig. Pmp frac @ 35 BPM. Max TP 3,850 psig. Frac schedule:

| Stage                                                               | Rate   | Stage Vol.  | Fluid       | Stage Proppant     | Cum Proppant |
|---------------------------------------------------------------------|--------|-------------|-------------|--------------------|--------------|
| Pad                                                                 | 35 bpm | 12,000 gals | 70Q XL CO2  | -                  |              |
| 1 ppg                                                               | 35 bpm | 15,000 gals | 70Q XL CO2  | 15,000# 20/40 BASF | 15,000#      |
| 2 ppg                                                               | 35 bpm | 15,000 gals | 70Q XL CO2  | 30,000# 20/40 BASF | 45,000#      |
| 3 ppg                                                               | 35 bpm | 12,000 gals | 70Q XL CO2  | 36,000# 20/40 BASF | 81,000#      |
| 4 ppg                                                               | 35 bpm | 8,000 gals  | 70Q XL CO2  | 32,000# 20/40 BASF | 113,000#     |
| 4 ppg                                                               | 35 bpm | 5,500 gals  | 70Q XL CO2  | 22,000# 20/40 CRC  | 135,000#     |
| Flush                                                               | 30 bpm | 6,164 gals  | Fluid Flush | -                  |              |
| <b>Total Sand 135,000# 67,500gal 25# PurGel III 206 TONS CO2 DH</b> |        |             |             |                    |              |

6. SWI 4 hrs. RDMO acid and CO2 frac equip. Install flowback manifold. Flowback well thru a choke manifold to flowback tank. Start with 8/64" ck. Increase choke size as appropriate
7. Flow test min 3hrs on fixed choke for IP tst. Record liq vols, FCP, & choke size. SWI. Report rates and pressure to Ryan Lavergne. RD flowback manifold. Evaluate flowing up casing.
8. MIRU PU. MI 6,588' of 2-3/8" 4.7#, J-55, EUE, 8rd tbg.
9. Blow well dwn. Kill well w/2% KCl wtr.
10. ND frac vlv. NU BOP.
11. TIH w/NC, SN & 2-3/8" tbg. Tag fill. (as long as fill is below perfs do not clean out)
12. ND BOP. NU WH. Land EOT @ 6,370'.
13. RU to flow to tst tnk.
14. Swab well until well KO.
15. RDMO PU.
16. Build btry. Install meter run. Schedule 1<sup>st</sup> delivery.
- Before continuing with procedure verify that downhole commingle approval has been received.**
17. MIRU PU. ND WH. NU BOP.
18. TOH & LD tbg.
19. Set 6 - 400 bbl frac tnks & 1 flowback tnk. Fill frac tnks w/2% KCl wtr. **NOTE:** Have frac co. test wtr for compatibility prior to frac & add biocide. Heat wtr in the frac tnks so that wtr temperature @ frac time is  $\pm 80^{\circ}$  F. Hot oil trk must be clean to avoid contaminating the frac wtr
20. ND BOP. NU 5K frac valve. RDMO PU.

21. RU full lubricator. RIH with a 5-1/2" frac plug & loaded perforating guns. Set CFP @ 5,710' (Collars @ 5,729' & 5,685'). Load hole w/2% KCl & PT frac plug to 2,500 psig for 5". Keep pressure on well for shooting Mancos perfs.
22. Perf MC w/3-1/8" csg gun loaded Owen HSC-3125-302 charges or equivalent performance charges (10 gm, 0.34" EHD, 21.42" pene, ttl 18 holes). Shoot perfs with +/- 2,000 psig on csg. POH w/csg gun.

| Mancos Perforations |     |       |     |       |     |       |     |
|---------------------|-----|-------|-----|-------|-----|-------|-----|
| Perf                | CCL | Perf  | CCL | Perf  | CCL | Perf  | CCL |
| 5,681               |     | 5,645 |     | 5,596 |     | 5,528 |     |
| 5,677               |     | 5,642 |     | 5,591 |     | 5,496 |     |
| 5,658               |     | 5,632 |     | 5,585 |     | 5,494 |     |
| 5,654               |     | 5,602 |     | 5,553 |     |       |     |
| 5,651               |     | 5,600 |     | 5,530 |     |       |     |

23. BD perfs. EIR w/2% KCl wtr. Max press 3,850 psig. Switch to acid. Acidize Mancos perfs fr/5,494'-5,681' w/1,500 gals 15% NEFE HCl acid (FE control, surf & CI additives) + 30 - 7/8" 1.1 SG Green Bio balls. Flush acid 3 bbls past btm perf w/138 bbls 2% KCl wtr or until ball off. Pump flush @ ±12 BPM. Record ISIP, 5". Surge off balls.
24. Frac MC perfs fr/5,494'-5,681' down 5-1/2" csg w/ 58,000 gals 70Q, N2 foamed, 20# XL gelled (Delta 140), 2% KCl water carrying 78,000# 20/40 BASF sand and 18,000# 20/40 CRC sand. Flush w/2% KCl wtr. After seeing a 1 pound drop on the blender densitometer, **switch to tub bypass**. Flush to top perf with a total volume of 5,492 gals. Est TP 2,800 psig. Pmp frac @ 30 BPM. Max TP 3,850 psig. Frac schedule:

| Stage                     | Rate   | Stage Vol.  | Fluid        | Stage Proppant                           | Cum Proppant |
|---------------------------|--------|-------------|--------------|------------------------------------------|--------------|
| Load                      | -      | -           | 2% KCl wtr   | 0#                                       | 0#           |
| Acid                      | 5 bpm  | 1,500 gals  | 15% NEFE HCl | 0#                                       | 0#           |
| Flush                     | 12 bpm | 6,046 gals  | 2% KCL wtr   | 0#                                       | 0#           |
| Pre-pad                   | 30 bpm | 500 gals    | 70Q XL Foam  | 0#                                       | 0#           |
| Pad                       | 30 bpm | 12,000 gals | 70Q XL Foam  | 0#                                       | 0#           |
| 1 ppg                     | 30 bpm | 14,000 gals | 70Q XL Foam  | 14,000# 20/40 BASF                       | 14,000#      |
| 2 ppg                     | 30 bpm | 14,000 gals | 70Q XL Foam  | 28,000# 20/40 BASF                       | 42,000#      |
| 3 ppg                     | 30 bpm | 12,000 gals | 70Q XL Foam  | 36,000# 20/40 BASF                       | 78,000#      |
| 3 ppg                     | 30 bpm | 6,000 gals  | 70Q XL Foam  | 18,000# 20/40 CRC                        | 96,000#      |
| Flush                     | 25 bpm | 5,450 gals  | Fluid flush  |                                          |              |
| <b>Total Sand 96,000#</b> |        |             |              | <b>58,000 gals 70Q Delta 140 XL Foam</b> |              |

Record ISIP & 5" SIP's.

25. RU full lubricator. RIH with a 5-1/2" frac plug and loaded perforating guns. Set CFP at +/- 4,440' (Collars @ 4,472' & 4,427'). Load hole w/2% KCl & PT frac plug to 2,500 psig for 5". Keep pressure on well to shoot Pt Lkt perfs.
26. Pull up hole & perf Point Lookout w/3-1/8" csg gun loaded Owen HSC-3125-302 charges or equivalent performance charges (10 gm, 0.34" EHD, 21.42" pene, ttl 22 holes).

| Point Lookout Perforations |     |        |     |        |     |        |     |        |     |
|----------------------------|-----|--------|-----|--------|-----|--------|-----|--------|-----|
| Perf                       | CCL | Perf   | CCL | Perf   | CCL | Perf   | CCL | Perf   | CCL |
| 4,409'                     |     | 4,296' |     | 4,229' |     | 4,183' |     | 4,150' |     |
| 4,383'                     |     | 4,290' |     | 4,217' |     | 4,176' |     | 4,145' |     |
| 4,377'                     |     | 4,263' |     | 4,205' |     | 4,172' |     |        |     |
| 4,340'                     |     | 4,254' |     | 4,202' |     | 4,163' |     |        |     |
| 4,309'                     |     | 4,234' |     | 4,194' |     | 4,155' |     |        |     |

27. MIRU acid equipment. BD perfs. EIR w/2% KCl wtr. Max press 3,850 psig. Switch to acid. Acidize PT LKT perfs fr/4,145'-4,409' w/1,250 gals 15% NEFE HCl acid (FE control, surf & CI additives) + 35 - 7/8" 1.1 SG Green Bio balls. Flush acid 3 bbls past btm perf w/108 bbls 2% KCl wtr or until ball off. Pump flush @  $\pm 12$  BPM. Record ISIP, 5". Surge off balls.
28. MIRU BJ frac equipment. Frac PT LKT perfs fr/4,145'-4,409' down 5-1/2" with 90,666 gals 70Q, N2 foamed, 12# XL gelled (Delta 140), 2% KCl water carrying 3,000# 12/20 BASF sand and 7,750# monolayer proppant. Pmp frac @ 40BPM. Do not exceed 3,850 psig. Est TP 2,200 psig. After seeing a 1 pound drop on the blender densitometer, **switch to tub bypass**. Flush to top perf w/4,143 gals 2% KCl wtr. Record ISIP, 5", 10" and 15" SIP's. Frac schedule:

| Stage                                          | Stage Clean Vol. | Total Slurry Vol. | Fluid                               | Stage Proppant    |
|------------------------------------------------|------------------|-------------------|-------------------------------------|-------------------|
| Pre-pad                                        | 150 gals         | 500 gals          | 70Q 12# XL Foam                     | -                 |
| Pad                                            | 1,500 gals       | 5,000 gals        | 70Q 12# XL Foam                     |                   |
| 0.5 ppg                                        | 600 gals         | 2,000 gals        | 70Q 12# XL Foam                     | 1,000# 12/20 BASF |
| Pad                                            | 1,500 gals       | 5,000 gals        | 70Q 12# XL Foam                     |                   |
| 1.0 ppg                                        | 600 gals         | 2,000 gals        | 70Q 12# XL Foam                     | 2,000# 12/20 BASF |
| Pad                                            | 1,500 gals       | 5,000 gals        | 70Q 12# XL Foam                     |                   |
| .05 ppg                                        | 7,500 gals       | 25,000 gals       | 70Q 12# XL Foam                     | 1,250# Monoprop   |
| .10 ppg                                        | 6,000 gals       | 20,000 gals       | 70Q 12# XL Foam                     | 2,000# Monoprop   |
| .15 ppg                                        | 5,000 gals       | 16,666 gals       | 70Q 12# XL Foam                     | 2,500# Monoprop   |
| .20 ppg                                        | 3,000 gals       | 10,000 gals       | 70Q 12# XL Foam                     | 2,000# Monoprop   |
| Flush                                          | 4,101 gals       | 4,101 gals        | 2% KCl wtr                          | -                 |
| <b>3,000# 12/20 BASF &amp; 7,750# Monoprop</b> |                  |                   | <b>90,666 gals 70Q N2 Delta 140</b> |                   |

29. RU full lubricator. RIH with a 5-1/2" frac plug and loaded perforating guns. Set CFP at +/- 3,900' (Collars @ 3,930' & 3,884'). Load hole w/2% KCl & PT frac plug to 2,500 psig for 5". Keep pressure on well for Perforating.
30. Pull up hole with guns and perf Point Lookout w/3-1/8" csg gun loaded Owen HSC-3125-302 charges or equivalent performance charges (10 gm, 0.34" EHD, 21.42" pene, tll 17 holes).

| Menefee Perforations |     |        |     |        |     |        |     |
|----------------------|-----|--------|-----|--------|-----|--------|-----|
| Perf                 | CCL | Perf   | CCL | Perf   | CCL | Perf   | CCL |
| 3,926'               |     | 3,872' |     | 3,792' |     | 3,754' |     |
| 3,923'               |     | 3,821' |     | 3,775' |     | 3,752' |     |
| 3,921'               |     | 3,819' |     | 3,771' |     |        |     |
| 3,919'               |     | 3,814' |     | 3,768' |     |        |     |
| 3,875'               |     | 3,810' |     | 3,764' |     |        |     |

31. BD perfs. EIR w/2% KCl wtr. Max press 3,850 psig. Switch to acid. Acidize MN perfs fr/3,752'-3,926' w/1,250 gals 15% NEFE HCl acid (FE control, surf & CI additives) + 30 - 7/8" 1.1 SG Green Bio balls. Flush acid 3 bbls past btm perf w/96 bbls 2% KCl wtr or until ball off. Pump flush @  $\pm 12$  BPM. Record ISIP, 5". Surge off balls.
32. Frac MN perfs fr/3,752'-3,926' down 5-1/2" with 74,833 gals 70Q, N2 foamed, 12# XL gelled (Delta 140), 2% KCl water carrying 3,000# 12/20 BASF sand and 6,000# monolayer proppant. Pmp frac @ 30 BPM. Do not exceed 3,850 psig. Est TP 2,200 psig. Flush w/3,666 gals foam (2 bbl underflush). Record ISIP, 5", 10" and 15" SIP's. Frac schedule:

| Stage                                          | Stage Clean Vol. | Total Slurry Vol. | Fluid                               | Stage Proppant        |
|------------------------------------------------|------------------|-------------------|-------------------------------------|-----------------------|
| Load                                           | -                | -                 | 2% KCl wtr                          | -                     |
| Acid                                           | 1,250 gals       | 1,250 gals        |                                     |                       |
| Flush                                          |                  |                   |                                     | -                     |
| Pre-pad                                        | 150 gals         | 500 gals          | 70Q 12# XL Foam                     | -                     |
| Pad                                            | 1,500 gals       | 5,000 gals        | 70Q 12# XL Foam                     | -                     |
| 0.5 ppg                                        | 600 gals         | 2,000 gals        | 70Q 12# XL Foam                     | 1,000# 12/20 BASF     |
| Pad                                            | 1,500 gals       | 5,000 gals        | 70Q 12# XL Foam                     | -                     |
| 1.0 ppg                                        | 600 gals         | 2,000 gals        | 70Q 12# XL Foam                     | 2,000# 12/20 BASF     |
| Pad                                            | 1,500 gals       | 5,000 gals        | 70Q 12# XL Foam                     | -                     |
| .05 ppg                                        | 6,000 gals       | 20,000 gals       | 70Q 12# XL Foam                     | 1,000 # Lite prop 108 |
| .10 ppg                                        | 4,500 gals       | 15,000 gals       | 70Q 12# XL Foam                     | 1,500 # Lite prop 108 |
| .15 ppg                                        | 4,000 gals       | 13,333 gals       | 70Q 12# XL Foam                     | 2,000 # Lite prop 108 |
| .20 ppg                                        | 2,250 gals       | 7,500 gals        | 70Q 12# XL Foam                     | 1,500 # Lite prop 108 |
| Flush                                          | 1,650 gals       | 3,666 gals        | 55Q 12# XL Foam                     | -                     |
| <b>3,000# 12/20 BASF &amp; 6,000# Monoprop</b> |                  |                   | <b>74,833 gals 70Q N2 Delta 140</b> |                       |

33. SWI 4 hrs. RDMO acid and frac equip. Install flowback manifold. Flowback well thru a choke manifold to flowback tank. Start with 8/64" ck. Increase choke size as appropriate.
34. MIRU PU. ND frac vlv. NU BOP.
35. PU & TIH w/CBP. Set plug @ 3,080' (Collars @ 3,102' & 3,057'). TOH w/tbg.
36. Load csg w/2% KCl wtr (pmp slowly to let gas work out csg). PT csg & CBP to 2,500 psig.
37. MIRU WLU. Perf 4 squeeze holes @ 2,856'. (TOC @ 2,950' by CBL). RDMO WLU.

38. Try to establish circ w/2% KCl wtr. Report results to Ryan Lavergne.
39. If circulation is established. PU & TIH w/5-1/2" CICR & 2-3/8" tbg to 2,760' (Collars @ 2,787' & 2,742'). Pmp dwn tbg & circ out TCA to confirm CICR is clear & csg is loaded. (If unable to circulate wtr to surf contact Ryan Lavergne for further instruction).
40. Set CICR @ 2,760'.
41. PT TCA to 500 psig. Rls press.
42. BD sqz holes & EIR w/fresh wtr. Max allowable surface press 6,000 psig (80% of tubing yield strength). Chk for circ out 5-1/2" x 8-5/8" annulus. **NOTE:** Cmt vol in step 44 will be based on inj rate, inj press & circ.
43. Notify BLM & OCD of cementing operations.
44. RU cmt services. Pmp 900 cuft of cmt (30% over openhole caliper vol fr/3,000' to surface csg shoe, 1,270' overlap into surface csg annulus & 300' csg volume) as follows: 10 bbls fresh wtr, 271 sx lead cmt (mixed at 11.2 ppg & 2.8 cuft/sx ) tailed with 100 sx Class 'G' neat cmt or similar w/sufficient fluid loss control (mixed at 14.2 ppg & 1.4 cuft/sx). Displace w/fresh wtr +/- 1 bbl short of CICR. Sting out of CICR and dump +/- 1 bbl cmt on top of CICR. Rev circ tbg clean. RDMO cmt services.
45. TOH w/2-3/8" tbg. LD setting tl. WOC min 24 hrs before drillout.
46. PU & TIH w/bit & tbg. DO cmt & CICR @ 2,760'. CO to CBP @ 3,080'. **DO NOT DO CBP @ 3,080'.**
47. TOH w/tbg & bit. PT sqz holes to 500 psig for 30". Record PT on chart. RDMO PU.
48. Set 2 - 400 bbl frac tnks & 1 flowback tnk. Fill frac tnks w/2% KCl wtr. **NOTE:** Have frac co. test wtr for compatibility prior to frac & add biocide. Heat wtr in the frac tnks so that wtr temperature @ frac time is  $\pm 80^{\circ}$  F. Hot oil trk must be clean to avoid contaminating the frac wtr.
49. MIRU frac & acid equip.
50. RU WL trk. RU full Lubricator. RIH w/guns. Perf Chacra w/3-1/8" csg gun loaded Owen HSC-3125-302 charges or equivalent performance charges (10 gm, 0.34" EHD, 21.42" pene, ttl 21 holes)

| Depth         | Density | TTL holes |
|---------------|---------|-----------|
| 2,963'-2,959' | 2 JSPF  | 8         |
| 2,954'        | 1 JSPF  | 1         |
| 2,950'        | 1 JSPF  | 1         |
| 2,948'        | 1 JSPF  | 1         |
| 2,943'        | 1 JSPF  | 1         |
| 2,940'        | 1 JSPF  | 1         |
| 2,858'-2,854' | 2 JSPF  | 8         |

= 21

51. BD perfs. EIR w/2% KCl wtr. Max press 3,850 psig. Switch to acid. Acidize Chacra perfs fr/2,854'-2,963' w/1,000 gals 15% NEFE HCl acid (FE control, surf & CI additives) + 35 - 7/8"

1.1 SG Green Bio balls. Flush acid 3 bbls past btm perf w/74 bbls 2% KCl wtr or until ball off. Pump flush @  $\pm 12$  BPM. Record ISIP, 5". Surge off balls.

52. Frac CH perfs fr/2,854'-2,963' down 5-1/2" with 54,833 gals 70Q, N2 foamed, 12# XL gelled (Delta 140), 2% KCl water carrying 2,000# 12/20 BASF sand and 5,000# monolayer proppant. Pmp frac @ 40BPM. Do not exceed 3,850 psig. Est TP 2,000 psig. Flush w/2,769 gals 2% KCl wtr (2 bbl underflush). Record ISIP, 5", 10" and 15" SIP's. Frac schedule:

| Stage                                          | Stage Clean Vol. | Total Slurry Vol. | Fluid                               | Stage Proppant    |
|------------------------------------------------|------------------|-------------------|-------------------------------------|-------------------|
| Pre-pad                                        | 150 gals         | 500 gals          | 70Q 12# XL Foam                     | -                 |
| Pad                                            | 1,500 gals       | 5,000 gals        | 70Q 12# XL Foam                     | -                 |
| 0.5 ppg                                        | 600 gals         | 2,000 gals        | 70Q 12# XL Foam                     | 1,000# 12/20 BASF |
| Pad                                            | 900 gals         | 3,000 gals        | 70Q 12# XL Foam                     | -                 |
| 1.0 ppg                                        | 300 gals         | 1,000 gals        | 70Q 12# XL Foam                     | 1,000# 12/20 BASF |
| Pad                                            | 900 gals         | 3,000 gals        | 70Q 12# XL Foam                     | -                 |
| .05 ppg                                        | 3,000 gals       | 10,000 gals       | 70Q 12# XL Foam                     | 500# Monoprop     |
| .10 ppg                                        | 3,000 gals       | 10,000 gals       | 70Q 12# XL Foam                     | 1,000# Monoprop   |
| .15 ppg                                        | 4,000 gals       | 13,333 gals       | 70Q 12# XL Foam                     | 2,000# Monoprop   |
| .20 ppg                                        | 2,250 gals       | 7,500 gals        | 70Q 12# XL Foam                     | 1,500# Monoprop   |
| Flush                                          | 1,246 gals       | 2,769 gals        | 55Q 12# XL Foam                     | -                 |
| <b>2,000# 12/20 BASF &amp; 5,000# Monoprop</b> |                  |                   | <b>54,833 gals 70Q N2 Delta 140</b> |                   |

53. SWI 4 hrs. RDMO acid and N2 frac equip. Install flowback manifold. Flowback well thru a choke manifold to flowback tank. Start with 8/64" ck. Increase choke size as appropriate

54. Flow test min 3hrs on fixed choke for IP tst. Record liq vols, FCP, & choke size. SWI. Report rates and pressure to Ryan Lavergne. RD flowback manifold.

55. MIRU PU.

56. Blow well dwn. Kill well w/2% KCl wtr.

57. ND frac vlv. NU BOP.

58. MIRU AFU.

59. TIH w/ 4-3/4" bit, SN & 2-3/8" tbg. Tag fill.

60. CO frac sd fill to 3,080'. DO CBP @ 3,080'. CO frac sd fill to 3,900' (frac plug). DO frac plug @ 3,900'. CO to 4,440' (frac plug). DO frac plug @ 4,440'. CO to 5,710' (frac plug). DO frac plug @ 5,710'.

61. CO to 6,588' (PBTD). Circ clean.

62. TOH & LD excess tbg & bit.

63. TIH w/NC, SN & tbg.



64. ND BOP. NU WH. Land EOT @ 6,340'.

65. RU to flow to tst tnk.

66. Swab well until well KO.

67. RDMO PU.

68. Schedule 1<sup>st</sup> delivery for remaining zones.

### **Regulatory Requirements**

New drill completion

Completion Reports

Request for Allowable

DHC

### **Services**

AFU

WL truck & mast truck to perf & set plugs

Acid & frac equip

### **Equipment List**

- 6 – 400 bbl frac tnks
- 1 flowback tnk
- 6,588', 2-3/8", 4.7#, J-55, EUE, 8rd tbg
- 6,588' tbg workstring to DO DV tl.
- 3 – 5-1/2" frac plugs
- 1 – 5-1/2" CBP
- 1 – 4-3/4" bit